

ABSTRACT OF THE DISCLOSURE

5 A cardiac assist device senses conditions of a heart and controls the generation of
various electrical stimuli in response to sense conditions of the heart. The cardiac assist
device generates a electrical pulse so as to defibrillate a fibrillated heart when the cardiac
assist device determines from the sensed conditions a state of fibrillation. The cardiac
assist device generates a chaos control electrical signal so as to bring a pre-fibrillated
10 heart condition back into a normal beating condition when the cardiac assist device
determines from the sensed conditions a pre-state of fibrillation. Lastly, the cardiac assist
device generates an electrical enhancement signal that causes a threshold of pacing cells
in the heart to be exceeded in response to a subthreshold stimulus when the cardiac assist
device determines from the sensed conditions a subthreshold pacing signal.